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KEY TO THE MODEL OF THE HEN

AND INCUBATION of the Egg.

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PLATE I.—THE OUTWARD CONFORMATION.

1. Comb.
2. Face.
3. Wattles.
4. Deaf-ear or earlobes.
5. Neck hackle.
6. Breast.
7. Back.
8. Saddle.
9. Tail coverts.
10. True tail feathers.
11. Wing-bow.
12. Wing coverts.
13. Wing bay (Diamond) secondaries.
14. Primaries.

PLATE II.—THE SKELETON.

Sk. Skull.
N. Cervical (neck) vertebrae (14 bones).
V. Thoracic or Dorsal (back) vertebrae (7 bones).

THE SKELETON—*Continued.*

S. Fused lumbo-sacral vertebrae (14 bones).
T. Coccygeal or caudal (tail) vertebrae (7 bones).

The hindermost is like a ploughshare and is called the

Pl. Pygostyle.
Cl. Clavicle (the wish-bone; the collar bone).
Sc. Scapula (the shoulder blade).
H. Humerus (bone of upper arm).
R. Radius } bones of forearm.
U. Ulna (the larger) } bones of forearm.
W. Carpal joint (wrist) 2 bones. } hand
II, III Metacarpal bone (consists of three bones fused) } hand
a. a. 3 Fingers { 1st 2 phalanges / 2nd 2 „ / 3rd 1 phalanx } hand
St. Sternum (breast-bone).
Jl. Ilium } the pelvic girdle or hip-bone.
Js. Ischium } the pelvic girdle or hip-bone.
Pb. Os pubis } the pelvic girdle or hip-bone.
F. Femur (bone of thigh).

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THE SKELETON—*Continued.*

Tb. Tibia (with Fibula) bones of leg.

Tr. Tarsus (ankle) consists of two rows of bones in embryo, but in adult the top row has fused with Tibia, and bottom with metatarsus, so that actually there is no tarsus in the adult.

Mt. Metatarsal bone (3 bones fused) bone of foot.

1,2,3,4. 4 toes	1st Toe (Hallux)	3	phalanges
	2nd „	3	„
	3rd „	4	„
	4th „	5	„

PLATE III.—THE ARTERIES and VEINS.

The heart, enclosed in its thin, membraneous pericardium, consists of 4 chambers, 2 atria into which the blood is received, and 2 ventricles from which it is despatched.

1. Atrium or Auricle (the receiving chamber of the heart).
2. Ventricle (the despatching chamber of the heart).
3. Aorta, the common arterial trunk, soon gives off the left and the right brachio-cephalic arteries, each of which gives off into
4. Common carotid artery (to the brain) and
5. Subclavian artery (to the arm) which supplies a brachial branch to the arm and a
6. Pectoral artery to the large breast muscles.

The aorta continues its course as the

7. Posterior aorta, and from this there arises among others, the:
8. Coeliac axis (to intestines, gizzard, and liver), and one of the main branches of this is the
9. Anterior mesenteric artery (to the intestines).

Other branches of the aorta are:

THE ARTERIES AND VEINS—*Continued.*

10. Femoral artery (to the leg),
11. Gluteal artery (to the leg).

From the right ventricle arises the

12. Pulmonary artery, conveying *venous* blood to the lungs where it becomes oxygenated.
13. Anterior (cranial) vena cava, conveying venous blood from the head region. Its tributaries include the
14. Jugular vein (from the head and neck),
15. Brachial vein (from the arm),
16. Pectoral vein (from the breast),
17. Posterior (caudal) vena cava, collecting the venous blood from the hinder part of the body. Among its tributaries are the:
18. Hepatic vein (from the liver),
19. Femoral vein (from the leg),
20. Gluteal vein (from the leg),
21. Renal vein (from the kidney).
22. Pulmonary vein, conveying *arterial* blood from the lungs to the left atrium.

PLATE IV.—THE MUSCLES.

1. Pectoral (breast) muscles, powerfully developed for the purpose of moving the wing.
2. Dorsal (back) muscles, more feebly developed.
3. Muscles of the leg.
4. Metatarsus.
5. Hallux (1st toe)
6. 2nd toe.
7. 3rd (middle) toe.

The Muscles—*Continued.*

8. 4th (outer) toe.
9. Arm.
10. Forearm.
11. Border of the arm.
12. Carpus (wrist).
13. Border of hand.
14. Crop.
15. Breast region.
16. Abdominal region.
17. Perineum.
18. Orifice of cloaca (anus or vent).
19. Coccyx (coccygeal vertebrae carrying the tail).
20. Coccygeal gland (oil gland on pygostyle).

PLATE V.—THE INTERNAL ORGANS.

1. Eye socket (orbit)
2. Temples.
2a Spinal cord.
3. Cerebrum (fore brain).
4. Cerebellum (hind brain).
5. Tongue.
6. Trachea, *(blue)* (lies in front of oesophagus as shown in Plate IV).
7. Left lung.
8. Bronchial tubes in the opened lung.
9. Right lung.
10. Pharynx (throat).
11. Crop.
12. Oesophagus *(brown)* foodpipe.

The Internal Organs—*Continued.*

13. Proventriculus (glandular part of stomach).
14. Gizzard (muscular part of stomach).
15. Spleen.
16. Liver.
17. Gall bladder.
18. Duodenum, that part of the small intestine immediately succeeding the stomach. The pancreas lies in its loop.
19. Free portion of small intestine.
20. Caecum (blind gut) arises at the junction of small and large intestines.
21. Large intestine (colon).
22. Cloaca (the dilated terminal portion of the large intestine).
23. Heart with coronary blood vessels which supply it with blood.
24. Right ventricle, pumps venous blood to lungs,
25. Left ventricle, pumps arterial blood all over body.
26. Right atrium receives venous blood from body.
27. Left atrium, receives oxygenated blood from the lungs.
28. Auriculo-ventricular valves (cardiac valves) guarding the openings between atria and ventricles and regulating the direction of the flow.
29. Aorta, the common arterial trunk.
30. Vena cava, the common venous trunk.
31. Right atrophied (shrunken) ovary, does not function. Actually the right ovary is exceedingly small.
32. Immature eggs of the left ovary.
33 The same, more developed.
34. Ovarian follicle (ovisac) rupturing and allowing the
35. Mature egg to escape and to pass into the oviduct.
36. Shrinking ovarian follicles after escape of mature eggs.

The Internal Organs—*Continued.*

37. Infundibulum, the funnel shaped orifice of the oviduct.
38. First part of the oviduct (secretes the albumen).
39. Middle of the oviduct (secretes the shell membrane and the shell).
40. Lower part of oviduct (the vagina).
41. Egg at the moment of passing out of the oviduct through the orifice of the cloaca.
42. Orifice of the cloaca partly lifted.
43. Anus or vent.
44. Left kidney.
45. Scapula.
46. Left clavicular or wish-bone.
47. Coracoid bone.
48. Sternum or breast bone.

The Internal Organs—*Continued.*

49. Seven left ribs removed.
50. Coccyx.

INCUBATION OF THE EGG.

From Egg to chick.

Plate	I	The shell of the egg.
„	II	The interior of the egg after two days of incubation.
„	III.	The egg after 4 days of incubation.
„	IV.	„ „ „ 8 „ „ „
„	V.	„ „ „ 11 „ „ „
„	VI.	„ „ „ 15 „ „ „
„	VII.	„ „ „ 18 „ „ „
„	VIII.	„ „ „ 21 „ „ „
„	IX.	The chicken comes out of the egg.

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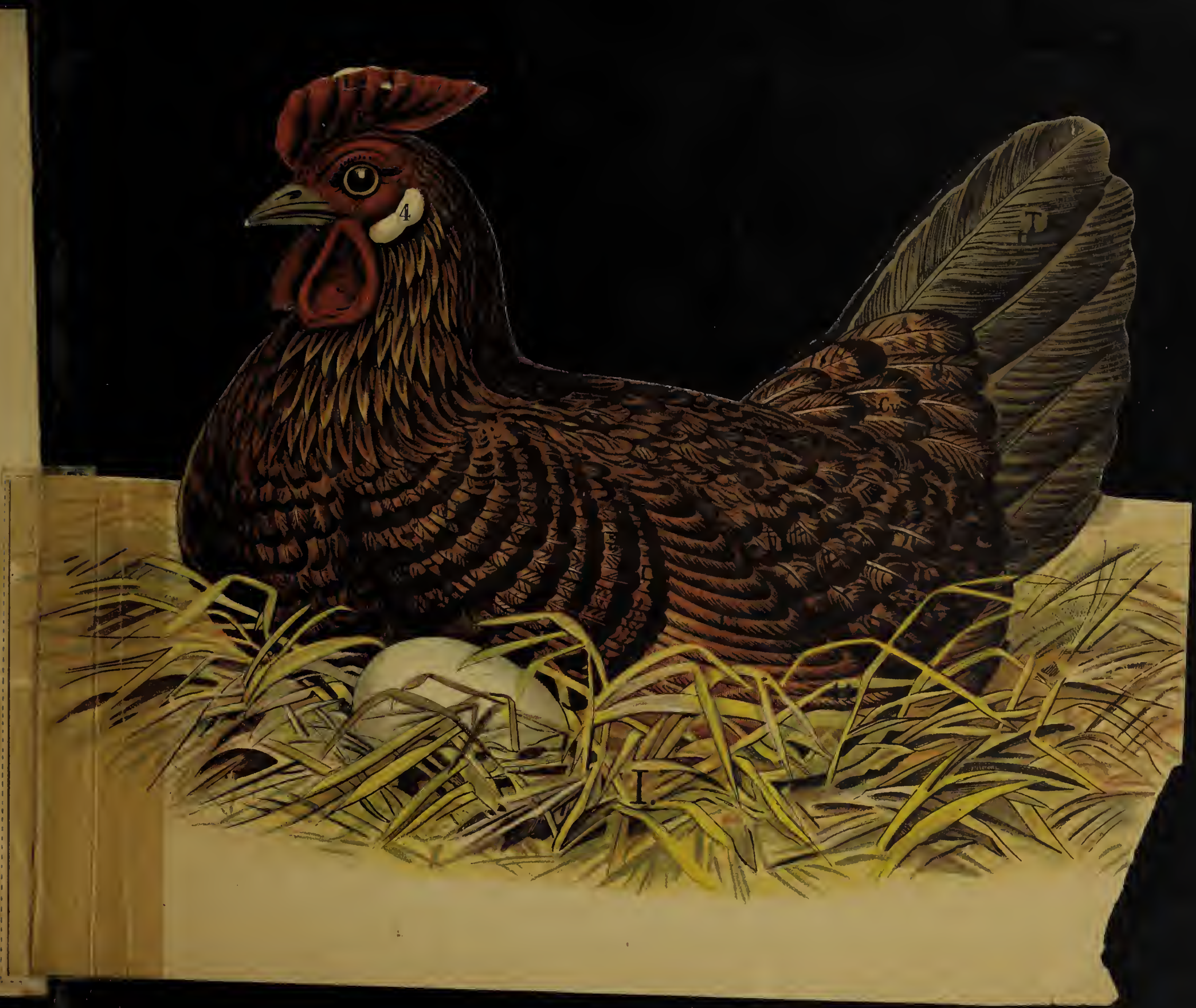
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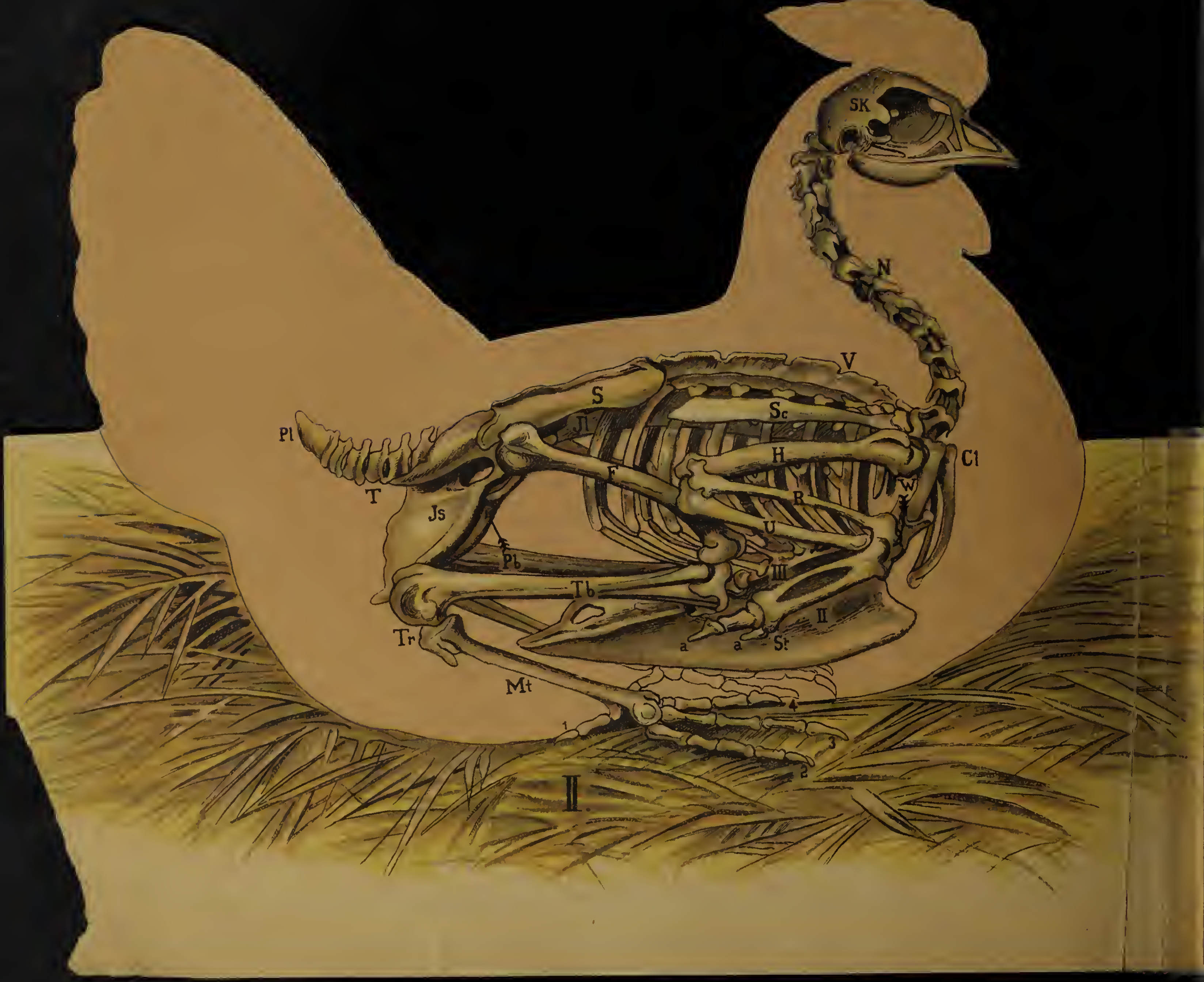

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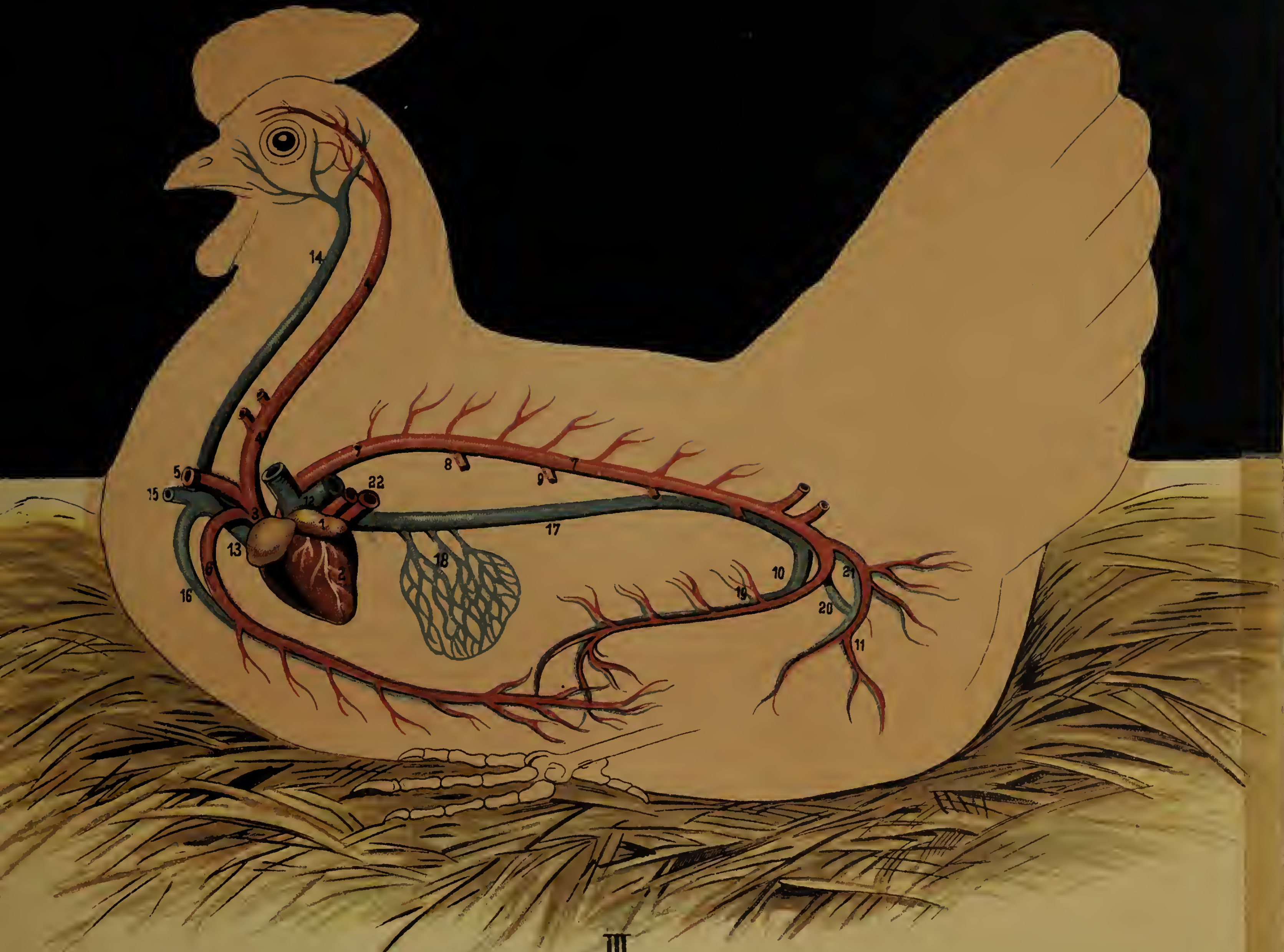

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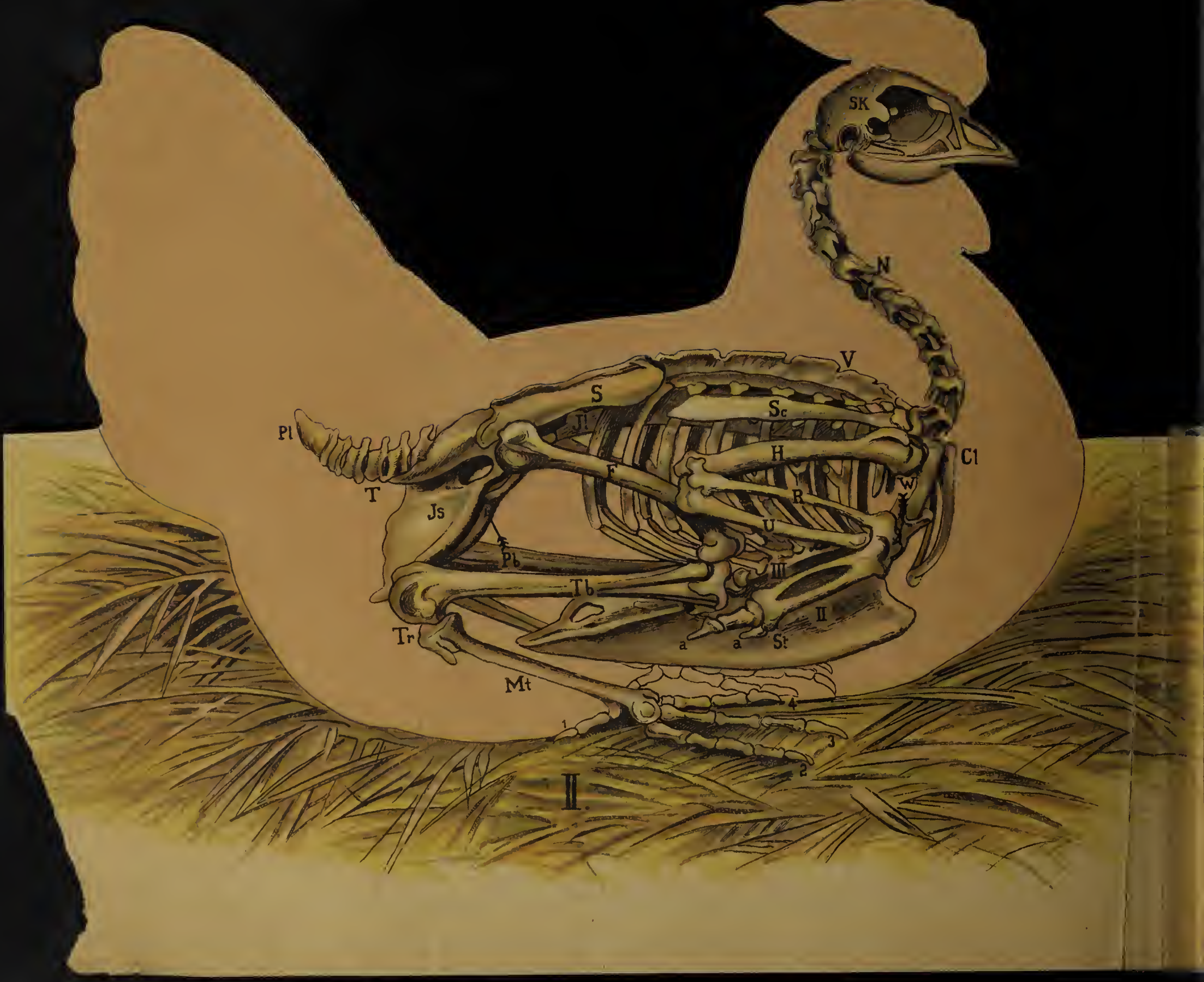

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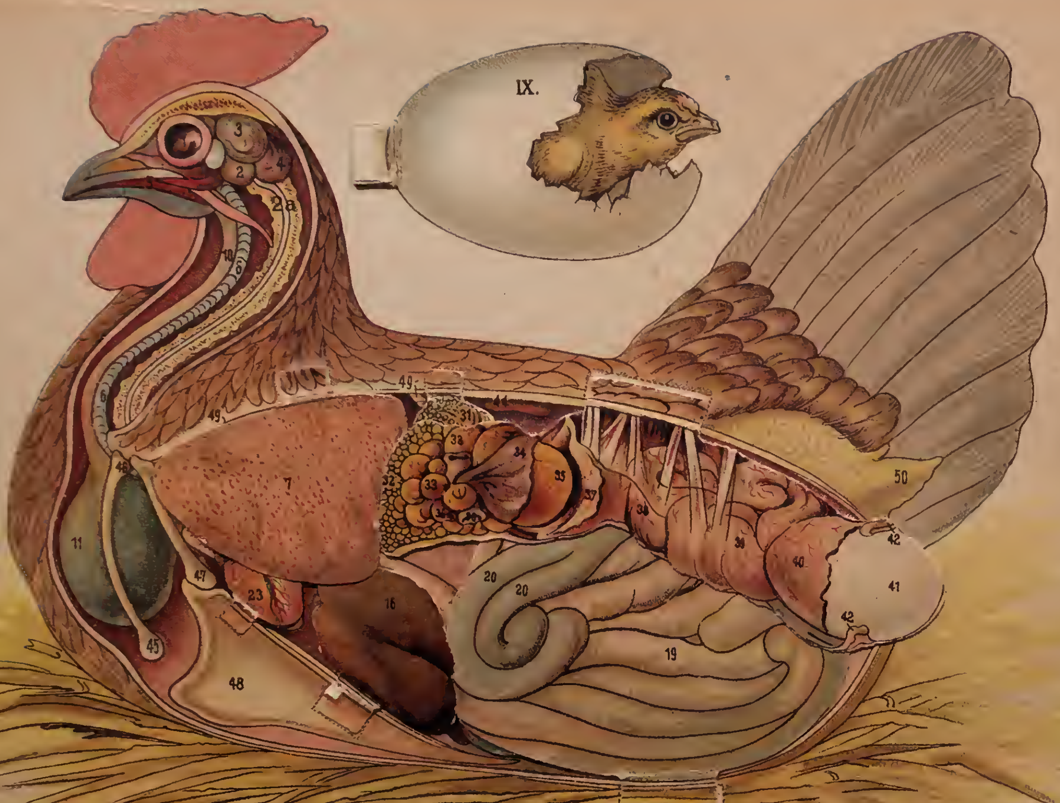
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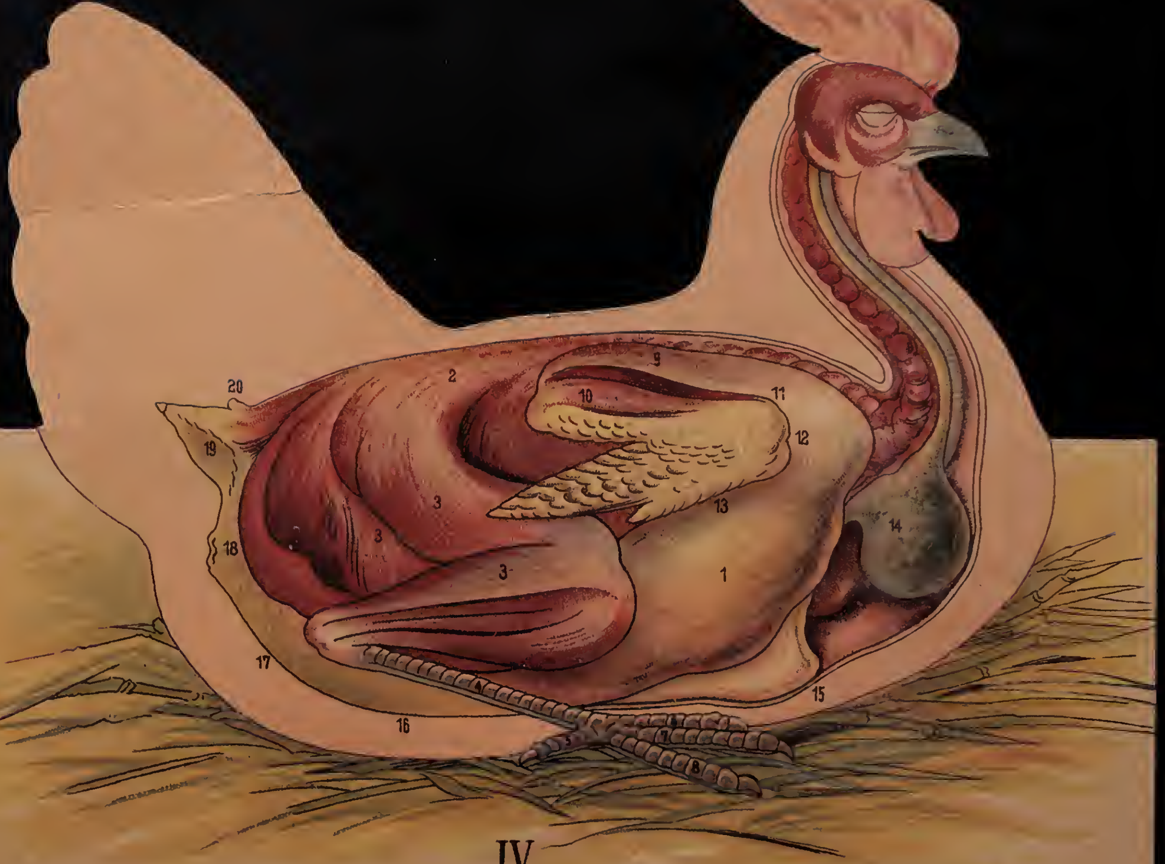
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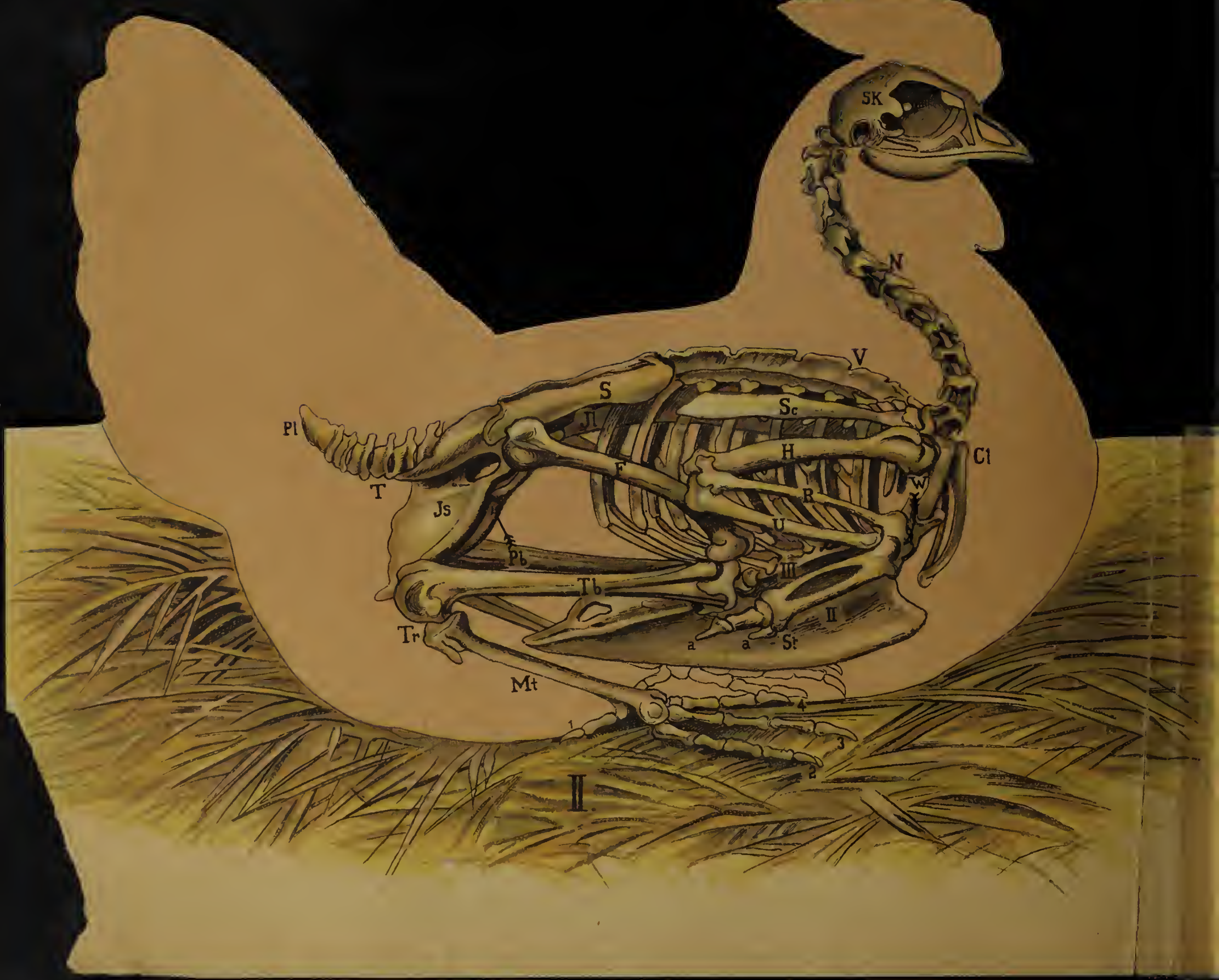

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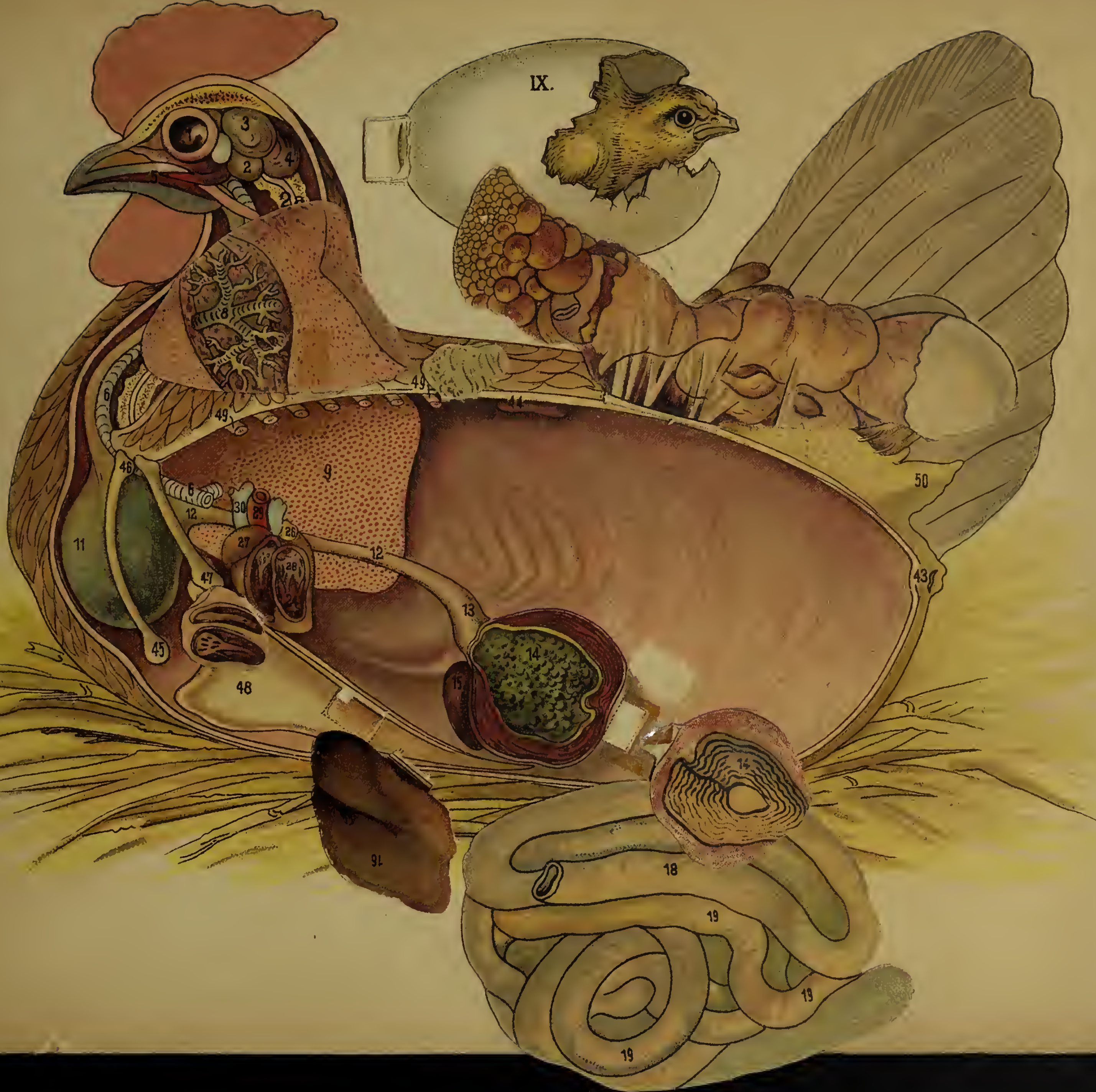
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